IN THE CLAIMS

Replace the claims with the following rewritten listing:

1. (Original) An antenna system, comprising a dielectric resonator antenna, and means for simultaneously supplying an electrical signal to first and second points in the dielectric resonator antenna, with a phase difference therebetween, such that the first and second points each couple to a desired mode of the dielectric resonator antenna, and such that a frequency response of the antenna has two nulls in its return loss characteristic.

2. (Original) An antenna system as claimed in claim 1, wherein the means for supplying an electrical signal comprises an electrical feed line, and the dielectric resonator material comprises slots to allow a magnetic field generated around the electrical feed line to couple into the dielectric resonator material.

3. (Original) An antenna system as claimed in claim 2, wherein the electrical feed line comprises a first path leading to a first slot in the dielectric resonator material, and a second path leading to a second slot in the dielectric resonator material.

4. (Original) An antenna system as claimed in claim 3, wherein the first path terminates underneath the first slot in the dielectric resonator material, and the second path terminates underneath the second slot in the dielectric resonator material.

5. (Original) An antenna system as claimed in claim 1, wherein the means for supplying an electrical signal comprise probes.

6. (Original) An antenna system as claimed in claim 1, wherein the means for supplying an electrical signal comprise pads connected to a surface of the dielectric resonator antenna.

7. (Currently Amended) An antenna system as claimed in claim 1, comprising means for

supplying the electrical signal to the first and second points with a phase difference in the range of 140° - 220° therebetween.

8. (Previously Presented) An antenna system as claimed in claim 1, comprising means for supplying the electrical signal to the first and second points with a phase difference therebetween, such that a frequency response of the antenna has two nulls in its return loss characteristic, spaced such that an operating bandwidth of the antenna system is effectively broadened.

9. (Previously Presented) An antenna system as claimed in claim 1, comprising means for supplying the electrical signal to the first and second points with a phase difference therebetween, such that a frequency response of the antenna has two nulls in its return loss characteristic, spaced such that the antenna system operates as a dual band antenna.

10. (Original) An antenna system as claimed in claim 6, comprising a first pad connected to the surface of the dielectric resonator antenna, and a second pad connected to said surface of the dielectric resonator antenna, and further comprising a microstrip line connecting the first and second pads.

11. (Original) An antenna system as claimed in claim 10, wherein the first pad is connected to the surface of the dielectric resonator antenna at a first end region thereof.

12. (Original) An antenna system as claimed in claim 11, wherein the second pad is connected to the surface of the dielectric resonator antenna at a second end region thereof, opposite the first end region.

13. (Original) An antenna system as claimed in claim 11, wherein the second pad is connected to the surface of the dielectric resonator antenna at a second region thereof, the position of the second region being chosen such that a desired HEM mode is excited.

14. (Previously Presented) An antenna system as claimed in claim 1, comprising a tuning screw located adjacent the dielectric resonator.

15. (Previously Presented) An antenna system as claimed in claim 6 further comprising at least one additional pad located underneath said surface of the dielectric resonator antenna to provide support therefor.

16. (Previously Presented) An antenna system as claimed in claim 1, wherein the first and second points each couple to a HEM mode of the dielectric resonator antenna.

17. (Previously Presented) An antenna system as claimed in claim 16, wherein the first and second points in the dielectric resonator antenna are chosen such that a higher order HEM mode is excited, and such that the antenna effectively forms a solid dielectric array.

18. (Original) An antenna system as claimed in claim 17, wherein an end face of the dielectric resonator material acts as a mirror.

19. (Original) An antenna system as claimed in claim 18, wherein said end face of the dielectric resonator material is coated with an electrical conductor.

20. (Original) An antenna system as claimed in claim 18, wherein said end face of the dielectric resonator material is coated with a metal.

21. (Withdrawn) An antenna system, comprising a dielectric resonator antenna, and means for supplying an electrical signal to first and second points in the dielectric resonator antenna, with a phase difference therebetween, such that the first and second points each couple to a desired mode of the dielectric resonator antenna,
wherein the first and second points lie in a first plane, which has first and second dimensions, and

wherein a size of the dielectric resonator antenna increases in at least one of the first and

second dimensions, with increasing distance away from the first plane.

22. (Withdrawn) An antenna system as claimed in claim 21, wherein the size of the dielectric resonator antenna increases in both the first and second dimensions, with increasing distance away from the first plane.

23. (Withdrawn) An antenna system as claimed in claim 21, wherein the size of the dielectric resonator antenna increases continuously with increasing distance away from the first plane.

24. (Withdrawn) An antenna system as claimed in claim 21, wherein the size of the dielectric resonator antenna increases stepwise with increasing distance away from the first plane.

25. (Withdrawn) An antenna system as claimed in claim 24, wherein the dielectric resonator antenna comprises a plurality of blocks, of increasing size, mounted together.

26. (Withdrawn) An antenna system as claimed in claim 25, wherein the plurality of blocks are cuboidal.

27. (Withdrawn) An antenna system as claimed in claim 25, wherein the plurality of blocks are circularly cylindrical.

28. (Withdrawn) An antenna system as claimed in claim 21, wherein the dielectric resonator antenna is made of a dielectric material having a relative dielectric constant greater than 10.

29. (Withdrawn) An antenna system as claimed in claim 28, wherein the dielectric resonator antenna is made of a dielectric material having a relative dielectric constant in the range from 10 - 36.

30. (Withdrawn) A multiply polarized antenna system, comprising a dielectric resonator antenna, and means for supplying electrical signals to a plurality of pairs of first and second

points in the dielectric resonator antenna, with a phase difference between the electrical signals applied to the first and second points in each of the plurality of pairs of points, such that the first and second points in each pair couple to a desired mode of the dielectric resonator antenna, and such that each pair couples to a desired polarization of a transmitted or received signal in the form of an electromagnetic wave.

31. (Withdrawn) A dual polarized antenna system, comprising a dielectric resonator antenna, and means for supplying electrical signals to a first and second pairs of first and second points in the dielectric resonator antenna, with a phase difference between the electrical signals applied to the first and second points in each of the pairs of points, such that the first and second points in each pair couple to a desired mode of the dielectric resonator antenna, and such that the first and second pairs couple to respective orthogonal polarizations of a transmitted or received signal in the form of an electromagnetic wave.

32. (Withdrawn) A dual polarized antenna system as claimed in claim 31, wherein the dielectric resonator antenna comprises a block of dielectric material having a square cross-section, and means for supplying electrical signals to a first pair of first and second points on opposed first and second sides of the dielectric resonator antenna and to a second pair of first and second points on opposed third and fourth sides of the dielectric resonator antenna.

33. (Withdrawn) A dual polarized antenna system as claimed in claim 31, wherein the first and second pairs of first and second points lie in a first plane, which has first and second dimensions, and

wherein a size of the dielectric resonator antenna increases in the first and second dimensions, with increasing distance away from the first plane.

34. (Withdrawn) An antenna system as claimed in claim 33, wherein the size of the dielectric resonator antenna increases continuously with increasing distance away from the first plane.

35. (Withdrawn) An antenna system as claimed in claim 33, wherein the size of the dielectric

resonator antenna increases stepwise with increasing distance away from the first plane.

36. (Withdrawn) An antenna system as claimed in claim 35, wherein the dielectric resonator antenna comprises a plurality of blocks, of increasing size, mounted together.

37. (Withdrawn) An antenna system as claimed in claim 36, wherein the plurality of blocks are cuboidal.

38. (Original) A method of operation of an antenna system, comprising a dielectric resonator antenna, the method comprising simultaneously supplying an electrical signal to first and second points in the dielectric resonator antenna, with a phase difference therebetween, such that the first and second points each couple to a desired mode of the dielectric resonator antenna, and such that a frequency response of the antenna has two nulls in its return loss characteristic.

39. (Original) A method as claimed in claim 38, comprising coupling the input signals to the electric field in the dielectric resonator material.

40. (Original) A method as claimed in claim 38, comprising coupling the input signals to the magnetic field in the dielectric resonator material.

41. (Previously Presented) A method as claimed in claim 38,
comprising supplying the electrical signal to the first and second points with a phase difference in the range of 140° - 220° therebetween.